

Aero Design Ltd.**Work Order Control Sheet**Work Order#: **2017-144** Date Opened: **31 August 2017**Title: **Fabrication**Aircraft OEM: **Eurocopter**Aircraft Model: **AS350/355**Product Type: **Cargo Basket Body**Product Model: **Medium Attach Hoops**Quantity: **20****Work Order Contents**

Work Order/Build Sheets (Procedures Provided)
Additional Work Sheets (Standard Practice)
Drawings (See List Below)
Parts Distribution Sheet
Sub Component Tags
Completed Certification (Original)
Time Sheet (R&D)
Notes

Initial or N/A

JF/JR
N/A
JF/JR
JF/JR
N/A
N/A
N/A
N/A

Build Sheet Contents

Tasks Initialled
Dual Inspections Initialled

CB/JC

N/A

Drawing List

Drawing #	Rev #	Description	Initial or N/A
76422	1	Attach hoop	JF/JR
76423	3	Attach hoop	JF/JR

Traveller**Component Completion**

Quantity Complete on This Work Order
Quantity Incomplete on This Work Order
Further Processing Required Before Release
Release to Stock as Components

As Instructed

10
N/A
N/A
N/A

Certification

Form One Completed
Serviceable (Green) Tag Completed
In Process (Yellow) Tag Completed
Unserviceable (Red) Tag Completed
Parts Tracking Tags (White) Completed
Parts Placed in Stores for Distribution

Initial or N/A

N/A
N/A
N/A
N/A
N/A
N/A

Additional Documentation

Documentation of a minor change
Non-Conformance Report Required
Service Difficulty Report Required

Initial or N/A

N/A
N/A
N/A

Billing

Local (Aero Design)
Research and Development
Third Party

JR
N/A
N/A

Work performed by:

Print: J. Francis/J. Rekve

ICC / Dual Inspection performed by:

Print: N/A

Work Order closed by:

Print: C. Brander/J. Clarke

Approved Manufacturing Facility 73-04

Sign:

Sign: N/A

Sign:

Form 20003

SCA: AD 01

SCA: N/A

SCA: AD 02

Date: 21-Oct-17

Date: N/A

Date: 24-Nov-17

Rev. Original 23 Sep 2014



Aero Design Ltd.

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Phone: 604-483-2376 Fax: 604-483-2372 E-mail: info@aerodesign.ca

AMF 73-04

Nomenclature: Stud No. of pieces: 20

Manufacturer: Aero Design Ltd

Part No.: 76423-06 Serial/Batch No.: NSM

TTSN: NP TSO: N/A Rem.: N/A

Work Order No.: 2017-146

Remaining Tasks to be Performed: Install in AS350 Long
Basket mount hoops

Signature: Chad Reh

Date: 05 Oct 17 Lic. No. / SCA AD 01



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AMF 73-04

Serviceable

Remarks

Removed from WO# 2015-108

CARGO BASKET HOOP FABRICATION - 76423

General

These instructions apply to cargo basket attachment hoop 76423-01 (medium AS350 basket) and 76423-07 (long AS350 basket). Refer to the following drawings, at the current revision, for dimensions and details:

76423, Revision 2 – Attachment Hoop

84262, Revision 1 – Handle Bracket Assembly

Notes

1. Always bend 1 hoop start to finish to ensure stops and stock length are correct.
2. Always pull with consistent speed through the bend, do not stop during the pull, and do not over-pull once the stop is reached.

Work Order: 2017-144

QTY: 20

Complete
(initial or SCA #)

Date Open: 31 AUG 2017

1. ½ Hoop Fabrication – ½" hoop

- a. Cut ½" x 0.035 material to 22.0", square ends.
- b. Record material PO on attached material list.
- c. De-burr cut ends using a sanding disc on a die-grinder or disc sander.
- d. Remove writing on tubes with acetone and scotch bright.
- e. On the hoop bending fixture, set the following stops:
 - i. Upper tube stop: ??
 - ii. Lower bend stop: 12mm
- f. Slide stock tube through bending die up to upper stop. Rotate bending arm clockwise until tube is secure, ready to bend. Ensure tube remains tight to upper stop.
- g. Slide shim all the way forward on bender to secure tube in die
- h. Pull bending arm clockwise until stop is reached. Pull slowly with consistent pressure.
- i. Check tube bend for square using a hoop jig or carpenters square. Adjust stops if required.
- j. Check for:
 - i. hoop height: 17 1/8" (Outside to outside)
 - ii. adjust upper stop for height if required

2. ½ Hoop Machining – ½" hoop – Handle Provisions (84262-01)

- a. Start with ½" half hoop from step 1.
- b. Setup manual milling machine with specific hoop vise jaw. Set XY 0 on far, right edge of jaw (end of hoop).
- c. Drill 2 places, 5/16" (0.313) holes using 5/16" (#4) centre drill through both sides in accordance with drawing. Run at 500 RPM. Apply a few drops of Rapid-Tap cutting oil to each location before drilling.
 - i. locate 0.23" from edge (within tolerance specified on drawing).
- d. Wipe or blow off cutting oil and de-burr with scotch-brite disc on die-grinder.
- e. Tag in process hoop(s) and place into stock.

3. ½ Hoop Fabrication – 1" hoop

- a. Cut 1" x 0.065 material to 28.0", one end square, one end @ 16 degrees.
- b. Record material PO on attached material list.
- c. De-burr cut ends using a sanding disc on a die-grinder or disc sander.
- d. Remove writing on tubes with acetone and scotch bright.
- e. On the hoop bending fixture, set the following stops:
 - i. Upper tube stop: ??
 - ii. Lower bend stop: ??
- f. Slide stock tube through bending die up to upper stop. Rotate bending arm clockwise until tube is secure, ready to bend. Ensure tube remains tight to upper stop.
- g. Slide shim all the way forward on bender to secure tube in die
- h. Using a long snipe tube, pull bending arm clockwise until stop is reached. Pull slowly with consistent pressure.
- i. Check tube bend for angle using hoop jig. Adjust stops if required.
- j. Check for:
 - i. hoop height from jig
 - ii. adjust upper stop for height if required
 - iii. length to allow 60 degree cut.
- k. Using hoop jig, mark for 60 degree cut on bottom end. Cut to length.
- l. De-burr cut end using a sanding disc on a die-grinder or disc sander.

4. ½ Hoop Machining – 1" hoop

- a. Start with 1" ½ hoop as stock.
- b. Setup manual milling machine with standard steel vise jaws. Insert hoop into vise flat on bottom of vise, 16 degree side on right. Set XY 0 on far, right edge of hoop (end of hoop). Shift X along hoop 0.893" and set X 0. Shift Y -0.5". Set stop against end of tube.
- c. Drill two places, 5/8" (0.625) holes using 5/8" (#7) centre drill through both sides in accordance with drawing. Apply a few drops of Rapid-Tap cutting oil to each location before drilling.
- d. Wipe or blow off cutting oil and de-burr with scotch-brite disc on die-grinder.
- e. Set tube in vise with 60 degree end on right.
- f. Using ½" coated carbide end mill, mill slot 2.25" deep (edge to edge, 2.0 edge to centre). Apply a bead of Rapid-Tap cutting oil along cut line before milling.
- g. Wipe or blow off cutting oil and de-burr with scotch-brite disc on die-grinder.
- h. Tag in process hoop(s) and place into stock.

5. Joint Preparation

- a. Set 1" hoop in hoop jig. Insert ½" hoop into 1" hoop, against side stop of jig. Mark slot location in 1" hoop onto ½" hoop. Trim ½" hoop with vertical bandsaw if required, and shape to match slot with disc sander.

6. Welding – Lugs

- a. Insert two 76423-05 lugs (medium basket) or 76423-06 lugs (long basket) into holes in 1" hoop. Seat flush with inboard face of tube using a C-clamp or vise. Attach 11" spacing jig with 3/8-24 bolts to lugs.
- b. TIG weld all around both sides of lugs. 2 places.
- c. Record lug and welding rod PO/WO on attached material list.

7. Welding – Handle Bushings – 84262-01

- a. Insert 84271-01 bushings into ½" hoop prepared in step 2. above.
- b. TIG weld bushing both sides, 2 bushings per hoop.
- c. Record bushing and welding rod PO/WO on attached material list.

AD
73-04
05

8. Welding – Hoop Assembly

- a. Insert 1" hoop from step 6 and ½" hoop from step 7 into hoop jig. Seat ½" hoop into slot in 1" hoop.
- b. Tack weld hoops together, minimum 4 places, to hold hoop together to complete welds out of jig.
- c. TIG weld around ½" hoop in slot.
- d. Cap ½" – 1" tube joint with 76423-04 cap. TIG weld around cap.
- e. Record cap and welding rod PO/WO on attached material list.

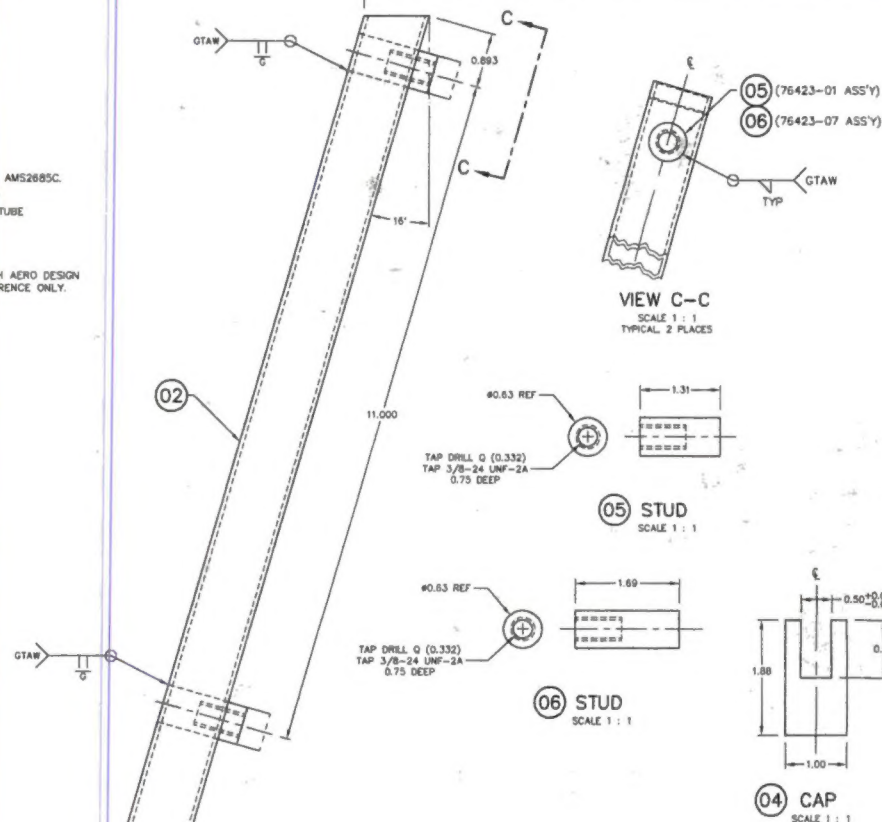
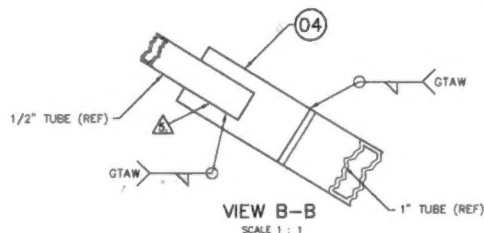
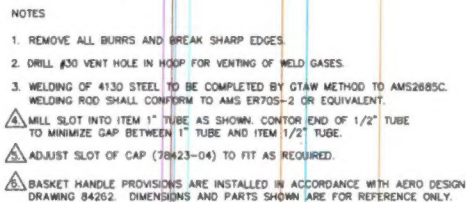
AD
73-04
05

9. Finishing and Inspection

- a. Run 3/8-24 tap through welded lugs.
- b. Grind inside surfaces flush at lugs and slot in 1" tube.
- c. Inspect hoop for conformity to drawing.
- d. Tag complete and inspected hoop(s) and place into stock.

AD
73-04
02

REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE	RRR	24 JAN 96
1	ADDED 76432-07 ASSY TO 76433-06 PART	RRR	05 MAR 96
2	CHANGED LENGTH OF ITEM (TEM 03)	BAC	08 JULY 96
3	TITLE BLOCK UPDATED; FORMAT UPDATED; LENGTHS OF ITEMS (TEM 05 & 06) CAP (ITEM 04) UPDATED; HANDLE PROVISIONS (ITEM 08) ADDED	BAC	14/05/2014

[illegible]

APPROVALS DATE DRAWN: R. RATHWELL 24 JAN 05 CHECKED: E. BURCON		 AERO DESIGN LTD. 9888A MALAYSIA ROAD POWELL RIVER, BC, CANADA, V9A 0G3 TEL: 250-461-5752 FAX: 250-461-5753
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS ANGLES .XXX ±.010 ±1/2° .XX ±.03 .X ±.1		
EUROCOPTER AS350 & AS355 SERIES QUICK RELEASE CARGO BASKET ATTACHMENT HOOP ASSEMBLY		SCALE 1 : 1 SHEET 1 OF 1
		DWG. NO. DWG. NO. REV. A1 76423 3

Work Order: 2017-144Material Tracking Sheet
Eurocopter AS350 / AS355
Long Basket Hoops

LONG

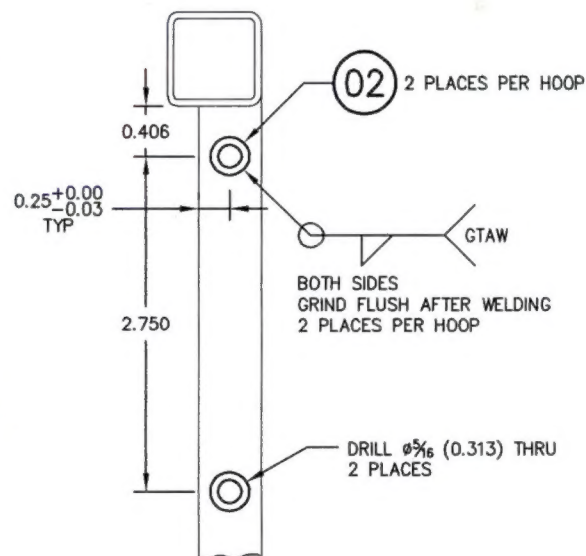
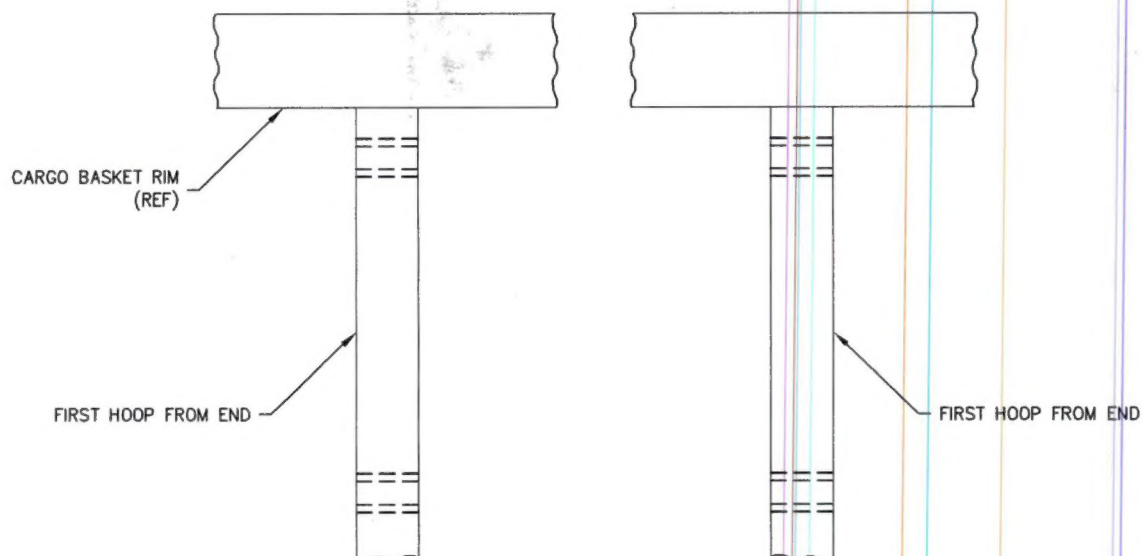
1 of 1

Date Opened: 31 AUG 2017

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
Step 1	0	N/A	76421-01	Hoop - standard	4130 Steel, 1/2" x 0.035 Sqr. Tube	17038 PRM
	10		76423-07	Hoop - attachment		
Step 1				1/2 Hoop Fabrication - 1/2" hoop		
	.1		--	1/2" Tube - hoop	4130 Steel, 1/2" x 0.035 Sqr. Tube	17038 PRM 2017-144
Step 2				Machining	None	
Step 3				1/2 Hoop Fabrication - 1" hoop		
	.1		--	1" tube - hoop	4130 Steel, 1" x 0.065 Sqr. Tube	2017-83
Step 4				Machining	None	
Step 5				Joint Preparation	None	
				Welding		
Step 6	20	20 PRM	76423-06	Stud	1018 Mild Steel, 5/8" Dia.	2017-146
Step 7	.2	84262	84272-01	Bushing	4130 Steel, 5/16" x 0.058 Rnd. Tube	206-134
Step 8	.1		76423-04	Cap	1018 Mild Steel, 0.050" Sheet	15035
	A/R		--	Welding Rod	ER70S-2	16078
Step 9				Finishing and Inspection	None	

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REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE - CREATED FROM 36262	BJC	03/11/2009
1	CHANGE LOCATION OF BUSHINGS	BJC	29/09/2011
2	UPDATED TITLE BLOCK, MOVE LID PROVISIONS TO 84263	BJC	14/02/2014



01 BASKET HANDLE PROVISIONS ASSEMBLY PROVISIONS TO BE INSTALLED IN HOOPS BEFORE ASSEMBLY TO BASKET RIM

NOTES:

1. REMOVE ALL BURRS AND SHARP EDGES.
2. WELDING TO BE COMPLETED BY GTAW METHOD TO AMS2685C USING ROD CONFORMING TO ER70S-2 OR EQUIVALENT.

4	84272-01	02	BUSHING
	84262-01	01	BASKET HANDLE PROV. ASSY
01	PART NO.	ITEM	DESCRIPTION
QTY	LIST OF MATERIALS		

APPROVALS		DATE	
DRAWN:	JEFF CLARKE	03 NOV 2009	
CHECKED:	E. BURGAIN		
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HELIICOPTER CARGO BASKET BASKET HANDLE PROVISIONS ASSEMBLY		SCALE 1 : 1	DWG. NO.
		SHEET 1 OF 1	84262
			2